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ABSTRACT

Many employers have asserted that women are not good candidates for administrative positions because they could not stand up to the pressures and stress associated with administrative responsibilities. To test the validity of this assertion, a comparision was made of the occupational stress profiles of male and female educational administrators in Oregon. The Administrative Stress Index, a 35-item questionnaire, was developed and sent to all members of the Confederation of Oregon School Administrators (N=1855). Four interpretable factors were obtained from 25 of the 35 items: (1) role-based stress, associated with the administrative role and responsibilities: (2) conflict-mediating stress, concerned with conflict resolution among students, parents, and school: (3) task-based stress, day-to-day stress in an organizational setting: and (4) boundary-spanning stress, arising from administrator activities in relating the school to the external environment. One-way analyses of variance, conducted on 1156 useable questionnaires, showed that female administrators experienced substantially lower levels of occupational stress on all four dimensions than their male counterparts, suggesting implications for recruitment of women into administrative positions. (Author/NRB)

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OCCUPATIONAL STRESS PROFILES OF MALE VERSUS FEMALE ADMINISTRATORS

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Occupational Stress Profiles of Male versus Female Educational Administrators

STATEMENT OF PROBLEM

National employment statistics show that the number of women entering the labor force is steadily on the rise. However, the majority of women are still employed in lower paying occupations, with few women in administrative positions. Even in the so-called predominantly female professions, such as education, there are comparatively few women in administrative positions. According to statistics compiled by the National Education Association, some 70% of elementary and secondary school teachers are women, yet only 37% of elementary school principals and less than 4% of secondary school principals are women.

The reasons often cited for not recruiting women into the ranks of administration are: women are less committed to their careers; women are more emotional and less rational than men and hence could not handle the pressures and stress associated with administrative responsibilities. This study sought to test the validity of the latter assertion. Specifically, it sought to compare the occupational stress profiles of male versus female educational administrators in Oregon to determine whether there were significant differences in their profiles and whether women experienced more or less stress than their male counterparts.

A comparative analysis of the occupational stress profiles of male versus female administrators entail the development of an instrument for measuring job-related stress. A cursory review of the literature on social-psychological stress indicates that there is a plethora of analytically independent sources of stress, implying the multi-dimensionality of the construct. However, most measures of stress available to date fail to tap the multi-dimensionality of the construct.

The Job-Related Stress Index (JRS) developed by Indik, Seashore and Slesinger (1964), which is one of the more widely used measures of stress, was only able to tap one or at best two underlying sources of occupational stress. Consequently, the larger study of which this particular research is a part, sought to develop a more comprehensive instrument that would measure the diverse sources of social-psychological stress which arise within complex administrative organizational roles. To maximize internal validity of the instrument, the questionnaire was developed specifically for use on a homogeneous population, namely administrators of educational institutions. Although the sample included vice-principals, principals and superintendents, all these positions involve administrative functions.

SUBJECTS USED

The instrument developed to measure administrative stress was sent to all members of the Confederation of Oregon School Administrators (n = 1855). 1207 questionnaires were returned. Of these, 1156 were useable. Subjects occupied administrative positions at either the vice-principal, principal or superintendent levels in the State of Oregon.

The average subject was 42 years old and had 9 years of administrative experience. The median hours worked per subject was 55, and the median percent of total life stress attributed to work was 75%. Approximately 9.3% (or 108) of the respondents were female. These occupied positions at all three different levels of administration: vice-principal, principal and superintendent levels.

PROCEDURES

Instrument Development

The questionnaire developed to measure sources of administrative stress was evolved through a series of iterations designed to insure that all relevant dimensions of job-related stress were tapped. Indik et al.'s (1964) JRS index comprised the initial questionnaire core. These 15 items were supplemented by others suggested from a review of current publications for public school admini-

strators, and by items suggested from stress logs kept by 40 school administrators for a period of one week. These 40 administrators were asked to keep a diary of work-related stress. They were asked to record the most stressful single incident and the most stressful series of related incidents occurring every day for a period of seven days. At the end of the week, they were asked to identify other sources of stress that might not have occurred during the week in which stress logs were kept.

The pilot instrument was pre-tested with a sample of 25 practising administrators. After revision and a second pilot test (n = 20) the final instrument comprised 35 items with the following 5-point Likert-type response categories: 1 = "rarely or never bothers me", 3 = "occasionally bothers me", and 5 = "frequently bothers me". This 35-item instrument was designated as the Administrative Stress Index (ASI). Of these 35 items, 12 were retained from the JRS.

Principal Components Analysis of ASI

Principal components analysis of the ASI revealed a weak general factor, suggesting that the scale was multi-dimensional in nature. Upon subsequent rotations, four interpretable factors were obtained. 10 items failed to cluster around any single factor. Consequently, these items were deleted from subsequent analysis.

Table 1 presents the factor loadings obtained under orthogonal varimax rotation for the remaining 25 items.

Factor 1 was comprised of 7 items, 6 of which were similar to Indik et al.'s (1964) JRS index. These items dealt with stress arising from the respondent's role and responsibilities as an administrator. This factor was labeled role-based stress. Factor 2 was comprised of 3 items which dealt with resolution of conflicts between students, and between parent/school. This factor was labeled conflict mediating stress. Factor 3 was made up of 10 items. It was labeled task-based stress or stress arising from the performance of one's day-to-day activities in

an organizational setting. 8 of the 10 items comprising this factor were developed through content analyses of the stress logs and relevant occupational literature. Factor 4 was comprised of 5 items which dealt with stress arising from the administrator's activities in relating the school to the external environment, such as collective bargaining, and gaining public support for school budgets. This factor was labeled boundary spanning stress.

Coefficients of internal consistency, and median item correlations were also calculated to provide further justification for conceptualizing stress as a multidimensional construct. These are presented in Table 2.

RESULTS

To test the assertion that women were not good candidates for administrative psotions because they were not able to handle stressful situations, the levels of stress experienced by female administrators on all four dimensions were compared against those of their male counterparts. Table 3 presents the results of one-way analyses of variance between the male and female sub-groups on all 4 factors while controlling for effects such as age, number of years in present position, and number of years of administrative experience. The reasons for controlling for such effects was to make sure that any differences in means between the two sub-groups could not be attributed to such demographic variables as age, number of years in present position, and number of years of administrative experience.

Table 3 indicates that the levels of stress experienced by female administrators on all four factors were lower than that of their male counterparts, even though in some instances the differences were not statistically significant at the $\leq .10$ level. The most noticeable and significant differences were those for Factor 4. The boundary spanning stress (Factor 4) experienced by female administrators in all "age", "number of years in present position", and "number of years of administrative experience" categories was substantially lower than that of

male administrators. The role-based stress (Factor 1) experienced by female administrators was significantly lower than that of their male counterparts in 5 out of the 9 categories. The conflict mediating stress (Factor 2) experienced by female administrators was significantly lower than that of their male counterparts in 6 out of the 9 categories. Under task-based stress (Factor 3), with the exception of the "50 to 60+" age category, the differences between the male and female sub-groups were not statistically significant. But even here, the means of the female sub-groups were lower than that of the male sub-population in 8 out of the 9 categories.

CONCLUSIONS

These findings tend to refute the assertion made by many employers/personnel administrators who refuse to hire or promote women into administrative positions on the basis that women could not handle stressful situations which are normally associated with administrative responsibilities. The findings of this study are to the contrary. For Oregon school administrators at least, the levels of stress experienced by the female sub-groups were much lower than that of their male counterparts, particularly with respect to boundary spanning stress and conflict mediating stress. Researchers and practitioners have emphasized the importance of the organization's environment, and the need for the organization to successfully respond to and cope with the complexities and changes in the environment in order to survive. The same holds true for the educational sector. In recent decades, the general public has become more vocal in its criticisms of public school operations. As educational institutions have become a focal point for social change, they have had to respond at an increasingly rapid rate to government pressures for program innovations. All these changes point to the need for administrators who could keep a clear mind in dealing with the school's external environment. Given the findings in this study, it appears that female

administrators are particularly adept in performing these functions and activities. The study reported here represents the first of a series of studies to compare the occupational stress profiles of male vs. female administrators in other professions and other types of industry. If these findings are supported in other industries, employers and personnel administrators should take a close look at these findings plus other statistics showing that the average woman worker has a better record on absenteeism, job turnover and longevity on the job that she is generally credited with, and re-evaluate their attitudes towards the recruitment of women into administrative positions.

Table 1

Varimax Rotated Factor Matrix

Items[1]	Factor 1	Factor 2	Factor 3	Factor 4
Role-Based Stress				
*Knowing I can get information needed to carry out my job properly	.38	-.04	.19	.10
*Thinking I will be unable to satisfy conflicting demands of those with authority over me	.62	.06	.17	.09
-Trying to resolve differences with my superiors	.64	.05	.05	.09
*Not knowing what my supervisor thinks of me, or how he/she evaluates my performance	.66	.02	.03	.07
*Feeling that I have too little authority to carry out responsibilities assigned to me	.63	.03	.13	.07
*Being unclear on just what the scope and responsibilities of my job are	.63	-.02	.16	.11
*Trying to influence my immediate supervisor's actions and decisions that affect me	.67	.05	.11	.05
Conflict Mediating Stress				
-Trying to resolve differences between/among students	.01	.80	.14	.03
-Trying to resolve parent/school conflicts	.05	.58	.23	.23
-Handling student discipline problems	.01	.84	.14	.06
Task Based Stress				
-Being interrupted frequently by telephone calls	.03	.06	.46	.01
-Supervising and coordinating the tasks of many people	.16	.20	.42	.12
-Having my work frequently interrupted by staff members who want to talk	.00	.11	.48	.03
-Imposing excessively high expectations on myself	.21	.01	.41	.11
-Writing memos, letters and other communications	.09	.16	.34	.14
-Feeling I have to participate in school activities outside of the normal working hours	.12	.22	.41	.08
*Feeling I have too much responsibility delegated to me by my supervisor	.31	.15	.49	-.06
*Feeling that I have too heavy a work load	.13	.01	.70	..3
-Feeling that meetings take up too much time	.15	.00	.42	.24
-Trying to complete reports and other paper work on time	.08	-.01	.55	.33
Boundary Spanning Stress				
-Preparing and allocating budget resources	.12	.08	.24	.46
-Being involved in the collective bargaining process	.03	.07	.01	.61
-Complying with state, federal, and organizational rules and policies	.05	-.02	.26	.50
-Administering the negotiated contract (grievance, interpretation, etc.)	.10	.12	.06	.64
-Trying to gain public approval and/or financial support for school programs	.14	.05	.10	.50
Summary Statistics				
Eigenvalue	4.8	2.0	1.4	1.1
Percent of Common Variance	51.6	21.7	14.7	12.0

[1] JRS items are designated by an asterisk. Others, developed in the present study, are designated by a hyphen.

Table 2

Coefficient Alphas, Factor Correlations, Median Within and Between

Analysis[1]	Factor 1	Factor 2	Factor 3	Factor 4
Factor Matrix				
Factor 1	(.81)			
Factor 2	.37	(.81)		
Factor 3	.11	.33	(.77)	
Factor 4	.24	.36	.22	(.70)
Median Item Correlations				
- Within	.39	.53	.23	.31
- Between	.14	.16	.11	.16

[1] Coefficient alphas are indicated in the diagonal of the Factor Matrix

Table 3

ANOVA: Male versus Female Sub-Groups on all Four Factors

	Total Male $\bar{x}$	Total Female $\bar{x}$	1 to 5 yrs. Admin. Exper. Male $\bar{x}$	1 to 5 yrs. Admin. Exper. Female $\bar{x}$	6 to 15 yrs. Admin. Exper. Male $\bar{x}$	6 to 15 yrs. Admin. Exper. Female $\bar{x}$	16 to 20+ yrs. Admin. Exper. Male $\bar{x}$	16 to 20+ yrs. Admin. Exper. Female $\bar{x}$	Age (≤ 39) Male $\bar{x}$	Age (≤ 39) Female $\bar{x}$	Age (40 to 49) Male $\bar{x}$	Age (40 to 49) Female $\bar{x}$	Age (50 to 60+) Male $\bar{x}$	Age (50 to 60+) Female $\bar{x}$	1 to 5 yrs. In Pres.Posi. Male $\bar{x}$	1 to 5 yrs. In Pres.Posi. Female $\bar{x}$	6 to 20+ yrs. In Pres.Posi. Male $\bar{x}$	6 to 20+ yrs. In Pres.Posi. Female $\bar{x}$
Factor 1: Role-Based	14.86	13.38 (.010)	14.67	14.09 (N.S.)	14.99	13.29 (.100)	14.79	11.18 (.008)	14.94	13.75 (N.S.)	14.88	13.91 (N.S.)	14.85	12.89 (.020)	14.81	14.04 (N.S.)	14.89	11.94 (.003)
Factor 2: Conflict Mediating	6.87	5.99 (.011)	7.61	6.09 (.003)	6.93	5.91 (.090)	6.33	5.82 (N.S.)	7.13	5.89 (.060)	6.98	6.12 (N.S.)	6.60	6.00 (N.S.)	7.00	6.31 (.100)	6.73	5.47 (.030)
Factor 3: Task-Based	25.43	24.95 (N.S.)	25.54	25.60 (N.S.)	25.95	25.00 (N.S.)	24.63	22.71 (N.S.)	26.31	27.53 (N.S.)	25.39	25.38 (N.S.)	24.98	23.07 (.060)	25.42	25.14 (N.S.)	25.40	24.76 (N.S.)
Factor 4: Boundary Spanning	12.28	9.89 (.0001)	10.92	9.84 (.096)	12.24	9.94 (.003)	13.17	10.00 (.003)	11.43	9.57 (.030)	12.19	9.71 (.001)	12.19	9.71 (.001)	11.98	10.10 (.0005)	12.58	9.71 (.0003)

Note: Figures in brackets are significance levels

N.S. = not significant or $p > .10$